## DE G 9302 295.6 U1

Job No.: 1505-107212 Ref.: DE9302295.6U

## FEDERAL REPUBLIC OF GERMANY GERMAN PATENT OFFICE UTILITY MODEL NO. DE G 93 02 295.6 U1

Main Class: B 65 D 23/10

Secondary Class(es): B 65 D 1/04

Filing Date: February 17, 1993

Registration Date: April 15, 1993

Announcement in the Patent Gazette: May 27, 1993

## SUPPLY CONTAINER FOR FLOWABLE MEDIA

Name and Residence

of Holder: KTi Kunststofftechnik GmbH

4530 Ibbenbüren (DE)

Name and Residence

of Agent: V. Busse,

D. Busse, E. Bünemann U. Pott,

Patent Attorneys

4500 Osnabrück

The invention refers to a supply container for flowable media, in particular, for cleansing agents, foods, or the like, in accordance with the preamble of Claim 1.

The goal of the invention is to create a supply container of the type indicated, whose holding part, with little technical expenditure, makes possible both a displacement-safe affixing of the container and also a rapid adaptation to different application purposes.

Based on a supply container in accordance with the preamble of Claim 1, the invention attains this goal with the features of the characterizing part of Claim 1. With respect to other essential developments, reference is made to Claims 2-15.

With the development of the supply container in accordance with the invention, with the vertical groove, a holding element is formed with little technical expenditure for the supply container, which makes possible a sufficiently stable support of the supply container in different

support positions. The vertical groove which extends over the entire container length can be engaged on a carrying part so that with the effective frictional forces, a displacement-safe connecting engagement that can be quickly detached for the removal of the container is formed.

Likewise, quick access to the container contents is possible in this support position, with little expenditure--for example, if a corresponding container opening protrudes downward in a first connecting position, wherein the container contents can be removed with the effect of gravity. Likewise, it is conceivable that with a container opening directed upward found in a connection position changed by 180°, it is possible to press out or suction off from the container interior partial quantities of the container contents.

In an appropriate use, the supply container can be suspended with the vertical groove when not in use in a displacement-safe way on a carrying part as a counter-element, so that the supply container is positioned in a grip position which can be conveniently accessed. The individual formation of the cross section of the vertical groove makes possible thereby, with little technical expenditure, an adaptation to different carrying parts, for which purpose advantageously available holding or ornamental rods--for example, in sanitary or kitchen areas--are useful, on which the supply container in accordance with the invention can be engaged in without additional installation expenditure.

Other details and advantages of the invention can be deduced from the following description and the drawing, which illustrates schematically two embodiment examples of a supply container in accordance with the invention. The figures in the drawing show the following:

Figure 1 is a perspective representation of the supply container in accordance with the invention in a first embodiment;

Figure 2 is an individual representation of the supply container in accordance with Figure 1 in a side view;

Figure 3 is a top view of the supply container in accordance with Figure 2;

Figure 4 is a perspective representation of the supply container in accordance with the invention in a second embodiment;

Figure 5 is an increased individual representation of the supply container in accordance with Figure 4 in a front view; and

Figure 6 is a top view of the supply container in accordance with Figure 5.

Figure 1 shows in a perspective view on a wall 1 a supply container 3, affixed in its area on a carrying part 2, which comprises an essentially cylindrical basic form, with a bottom part 4 and a cover part 5 (Figure 2). The container 3 is thereby provided with a vertical groove 6 forming a holding part, by means of which the container 3 is provided with a closure opening 7 in which the depicted embodiment is held in such a way that the closure opening 7 has a grip position, directed downward.

The vertical groove is thereby formed in an appropriate development as a continuous catch groove 8 (Figure 3), taking up almost the entire container length H, which embraces the carrying part 2 in the grip position in accordance with the profile.

The catch groove 8 extends thereby, with the formation of a holding plane 9', parallel to a middle longitudinal plane 9 of the container 3 and has, in the transition area to the container side wall 11, individual form stops 12, 13 provided with the same radii of curvature.

In an appropriate embodiment, the vertical groove 6 is formed as a molding, directed inward from the container sidewall 11, so that the optically attractive container shape is formed (Figure 2). It is also conceivable for the vertical groove 6 to be formed in a form extension (not depicted), protruding from the container sidewall 11, by means of which the container 1 can also engage in the carrying part 2 in different grip positions.

The container 3 according to Figures 1-3 is provided with a reinforcement area 14, 15, in the area of its container sidewall 11, in the upper and lower end area of the cylindrical basic form, so that the vertical groove 6 or the corresponding area of the catch groove 8 in this way have an increase in stability, which is effective at least in certain regions, and thus containers 3 with greater weight can also be engaged in the grip position on the carrying part 2, in a displacement-safe and position-stable manner.

In Figure 2, the side view of the container 3 makes clear that it is provided with a wall 5', inclined to the middle longitudinal plane 9, in the area of its cover part 5, which is provided with the closure opening 7 in the acute-angle transition area 16 into the container sidewall 11. In this way, a complete emptying of the container interior can be attained in the grip position of the container 3, illustrated according to Figure 1, with little expenditure, since the container contents are forcibly guided to the closure opening 7, via an individual inner wall surface of the inclined cover part 5', and thus, the formation of hard-to-access remaining contents on the inner wall area of the container 3 is largely avoided.

In Figure 4, a perspective representation illustrates a second embodiment of the supply container 3', in accordance with the invention, on which the vertical groove 6' is provided in the area between two container chambers 21, 22 connected via a connecting part 20 and forms a multichamber container.

The top view of the multichamber container 3', in accordance with Figure 6, illustrates thereby that the container chambers 21, 22 are arranged mirror-symmetrical to the holding plane 9', and the connecting part 20 is formed, in an appropriate development, as a holding crosslink 23 (Figure 5), which extends vertical to the middle longitudinal plane 9 from the two upper cover parts 5" to the two lower bottom parts 4'.

With this form of the connecting part 20, vertical free spaces 24, 25 are advantageously formed on both sides of the holding crosslink 23, in the direction of the middle longitudinal plane

9', wherein in the area of the free space 25, the middle walls 26, 27 of the container chambers 21, 22, facing one another, are connected in one piece with the catch groove 8', and the individual outer form stops 12', 13' go over, in the shape of a curve, into the container side walls 11' of the container chambers 21, 22.

This formation of the vertical groove 6' makes possible a simple adaptation of the catch groove 8' to different diameters of the carrying parts 2, in interaction with the vertical free space 24 between the middle walls 26, 27, since by means of a spreading of the catch groove 8, it can be enlarged at least to the point that the middle walls 26, 27 of the container chambers 21, 22 touch each other in the area of the free space 24, wherein the holding crosslink 23 forms a spring-elastic readjustment element.

Each of the container chambers 21, 22 is provided with a closure opening 7', which is located in the middle in the individual cover part 5", so that the multichamber container 3 can be positioned in a grip position, similar to the embodiment in accordance with Figure 1, in such a way that the two closure openings 7' are directed downward (Figure 4).

In the previously described embodiments of the supply container 3 or 3', the individual container walls 11, 11' can be made of elastic material, in least in certain regions so that the container contents can be pressed out via appropriate pressure reshaping, for example, by means of manual pressure from the closure openings 7, 7'. The closure openings 7, 7' thereby form in total both fill and removal openings, each which are provided with a closing part (not depicted).

The supply containers 3, 3' can also be shaped with several vertical grooves 6, 6' (not depicted), provided as a holding part, in the area of their container sidewalls 11, 11', wherein they can be dimensioned with different diameters in the cross-sectional form so that an adaptation to differently dimensioned carrying parts 2 is possible and thus an expansion of the usage area of such supply containers 3, 3' is attainable.

In another embodiment, which is not depicted, it is conceivable for the vertical groove 6, 6' to be shaped with areas with different diameters in the direction of its longitudinal extension so that in this way, the container can also mesh into different carrying parts 2. This variation of the diameter can be advantageously provided in the area of the reinforcement regions 14, 15' of the container 3, so that at least two different carrying parts 2 can be used for support.

## Claims

1. Supply container for flowable media, in particular, for cleansing agents, foods, or the like, which comprises an essentially cylindrical basic form, which has a bottom part (4, 4') and a cover part (5, 5', 5"), with a closure opening (7, 7'), on which a holding part, supporting the container (3, 3') in a grip position on a carrying part (2), is provided, <u>characterized in that</u> the holding part is

formed as a continuous vertical groove (6, 6') which in the grip position is reached by the carrying part (2) in accordance with the profile.

- 2. Supply container according to Claim 1, characterized in that the vertical groove (6, 6') is provided as a catch groove (8, 8'), which extends parallel to a middle longitudinal plane (9) of the container (3, 3'); takes up, at least in certain regions, the entire container length (H) in a holding plane (9'); and has individual form stops (12, 13; 12', 13').
- 3. Supply container according to Claim 1 or 2, characterized in that the vertical groove (6, 6') is provided as a molding which is directed inwards from the container sidewall (11, 11').
- 4. Supply container according to one of Claims 1-3, characterized in that the vertical groove (6, 6') is provided in individual reinforcement regions (14, 15), forming in the grip position of the container (3) the upper and lower end area of the container sidewall (11).
- 5. Supply container according to one of Claims 1-4, characterized in that the container is provided with a cover and/or bottom wall area (5'), inclined toward the middle longitudinal plane (9), wherein a closure opening (7) is provided in at least one acute-angle transition area (16) into the cylindrical wall area (11).
- 6. Supply container according to one of Claims 1-5, characterized in that the vertical groove (6') is provided on a multichamber container (3'), which has at least two container chambers (21, 22) connected via a connecting part (20).
- 7. Supply container according to Claim 8 [sic], characterized in that the container chambers (21, 22) are arranged mirror-symmetrically to the middle longitudinal plane (9') and the connecting part (20) is provided as a holding crosslink (23), which extends in the middle longitudinal plane (9).
- 8. Supply container according to Claim 6 or 7, characterized in that vertical free spaces (24, 25) are formed on both sides of the holding crosslink (23) in the direction of the holding plane (9'), of which at least one (25) is limited by the form stops (12', 13') forming the catch groove (8').
- 9. Supply container according to one of Claims 5-7, characterized in that each container chamber (21, 22) is provided with at least one closure opening (7).
- 10. Supply container according to one of Claims 1-9, characterized in that the container wall (11, 11') is made of an elastic material, at least in certain regions.
- 11. Supply container according to one of Claims 1-10, characterized in that the closure openings (7, 7') form both fill as well as removal holes, each of which is provided with a closing part.
- 12. Supply container according to one of Claims 1-11, characterized in that the container (3, 3') is provided with several vertical grooves (6, 6') in the area of the container sidewall (11, 11').
- 13. Supply container according to Claim 12, characterized in that the vertical grooves (6, 6') are formed with cross-sectional forms which have various diameters.

- 14. Vertical container according to one of Claims 1-13, characterized in that the vertical groove (6, 6') has areas with different diameters in the direction of its longitudinal extension.
- 15. Vertical container according to Claim 14, characterized in that the different diameters are provided in the reinforcement regions (14, 15).

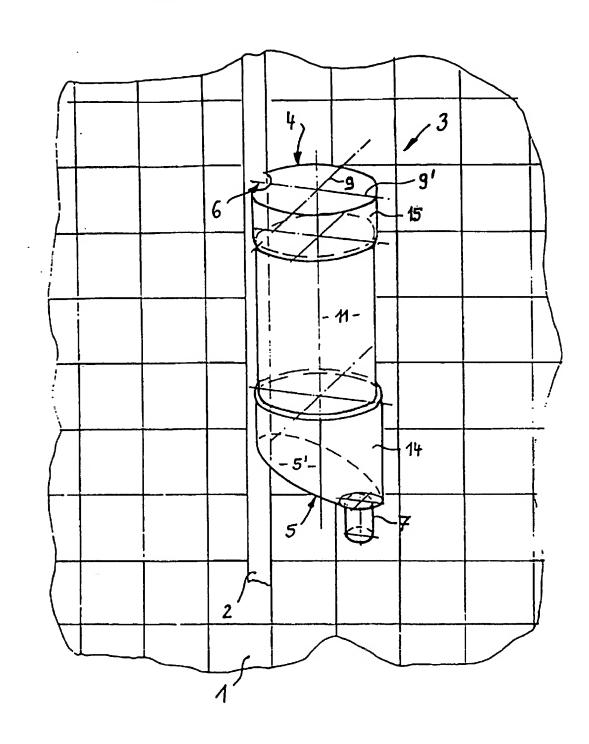
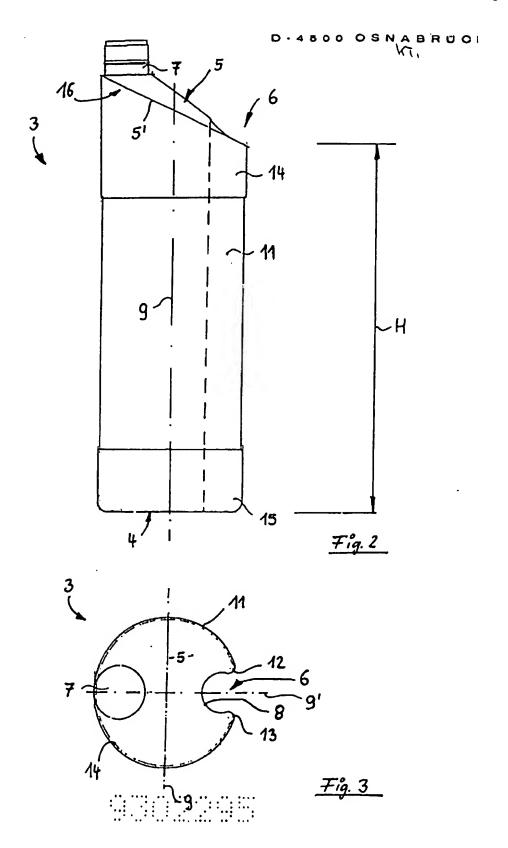


 Fig. 1



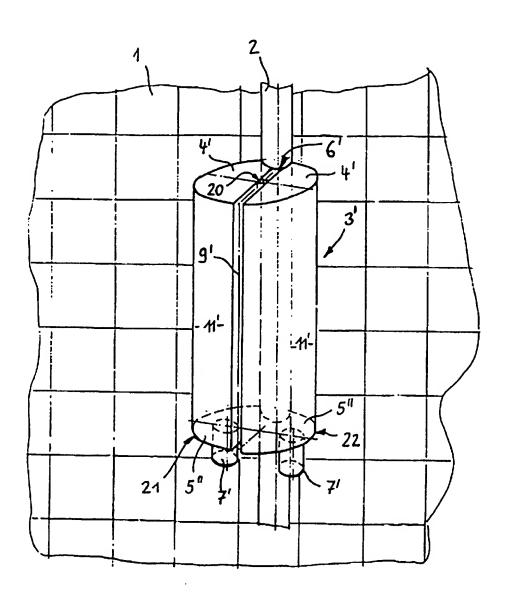


Fig. 4

PATENTANW XLTE
Dr.V.Busse-Dipl.-Ing.D. Dusse
Dipl.-Ing. E. Eunsmann
Dipl.-Ing. Uirich Pott
Großhandelsting 6 - Postfach 1226 ...
D - 4 5 0 0 O S N A B R U C R

kī;

